Remarks

The undersigned would like to thank the Examiner for the May 6, 2004, telephone conference during which the Examiner provided further explanations regarding rejections presented in the Examiners January 12, 2004 Office Action. During this telephone conference, the undersigned explained that the claimed inventions are directed to a peer-to-peer collaboration system in which separate (peer) workstations each operate on independent copies of data, where each copy contains a representation of the same model, and that model (as represented in each workstation's copy of data) is being collaboratively modified. Applicant's claimed invention allows workstations to synchronize (i.e., simultaneously modify) the separate copies of data such that each workstation has a consistent view of the model. During the telephone conference the Examiner agreed that Tang does not show such an architecture. More particularly, during the conference call, the Examiner and the undersigned discussed Fig. 8 of Tang which show that encounter aware application 131a and encounter aware application 131b each access a same copy of a data file ("File Y").

Although the Examiner asserted that this aspect of the invention (i.e., collaboratively working on a model that is represented by independently stored copies of data) was not clearly recited in the claims, the undersigned respectfully disagrees. In particular, the undersigned respectfully submits that both the phrase "any modification made at any workstation is duplicated at each other workstation" as recited in claim 1, and the claim 1 recitations requiring that, in response to a single change to the model, data is modified at both the first and by the second workstations, makes clear more than one copy of data is modified in response to a model change. Nevertheless, to emphasize this distinction, clarifying language has been added to the claims. Because this distinction was present in at least claim 1, and that distinction does distinguish the Tang reference, the undersigned respectfully submits that the issuance of a final

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office action was improper. The undersigned respectfully requests that the finality of the office action be withdrawn or all claims allowed.

Remarks responsive to the January 12, 2004, Office Action follow. Quotations of relevant comments from the Examiner (presented in small bold-faced type) precede applicant's remarks.

DETAILED ACTION

Claims 1-26 are pending in the present application.

Claim Rejections - 35 USC § 102

Claims 1-5 are rejected under 35 U.S.C. 102(e) as being unpatentable by Tang et al. (US patent no. 5,960,173).

As explained, supra, during a May 6, 2004, telephonic interview, the Examiner acknowledged that Tang failed to disclose a peer-to-peer collaboration system in which separate (peer) workstations each operate on independent copies of data, where each copy contains a representation of the same model, and that model (as represented in each workstation's copy of data) is being collaboratively modified. Applicant's claimed invention allows workstations to synchronize (i.e., simultaneously modify) the separate copies of data such that each workstation has a consistent view of the model. As suggested by the Examiner, Claim 1 was amended to clarify this distinction. The undersigned respectfully submits that claim 1 is now in condition for allowance.

Claim 1 recites a computer system operation method for use in a system comprised of a plurality of workstations arranged in a peer-to-peer architecture. The method providing a means for allowing multiple users simultaneously to modify a model of an object at separate workstations, such that any modification made at any workstation is duplicated at each other workstation in the system.

The Examiner, in here comments, states "Tang teaches awareness of others working on similar tasks in a network environment" (Office Action, page 5). But this is not what is recited in the claims. The claims of the present invention are not directed merely to providing information about "awareness of others working on similar tasks" in the manner disclosed in Tang, but, instead, are directed to a collaborative work station in which multiple users may simultaneously work on and modify the same model as represented in multiple independent data files (each data file being modifiable by a different one of the workstations) and in which modification commands are exchanged between workstations to synchronize those different data files. Tang, on the other hand, is directed to a system in which users may be able to work on the same data (i.e., file "Y" as described at Tang col. 15 line 28 – col. 18 line 61). Tang simply does not teach or suggest working on different data files and maintaining synchronization of those files by a peer-to-peer method.

> Re claim 1, Tang discloses ... method providing a means for allowing multiple users simultaneously to modify a model of an object at separate workstations (col. 3, lines 46–61), such that any modification made at any workstation is duplicated at each workstation in the system (col. 2, lines 41-63),

The Examiner, in her comments, asserts that col. 3, lines 46-61 of Tang teaches "means for allowing multiple users simultaneously to modify a model of an object at separate workstations." The undersigned fails to see a connection between the cited text and the teaching asserted by the Examiner. The cited text merely contains a number of generalized statement – for example, the general statement that multiple users may be performing the same or similar task. The claimed invention is much more specific. As explained above, what claim 1 requires that that peer workstations each update independent copies of data to maintain synchronization of a common model being manipulated. Based on the undersigned's understanding of Tang, the cited text fails to disclose simultaneous modification of a modeled object as recited by claim 1.

The Examiner, in here comments, further asserts that col. 2, lines 41-63 of Tang teaches "that any modification made at any workstation is duplicated at each workstation in the system." This Examiner's assertion is unsupported by the cited text. Col. 2, lines 41-63 of Tang is a

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general background discussion and discloses some ways in which an application is aware that more than one user is performing a similar task. For example, col. 2, lines 46-49 discloses that conventional web browsers can determine if two or more users are simultaneously accessing a web page. However, this does not teach or suggest that the two users can simultaneously modify the viewed data.

While Tang may <u>suggest</u> that simultaneous modification of a model is desirable, <u>it simply doesn't teach how</u> to do so and how to maintain synchronization of data. Fig. 8 and the accompanying text makes clear that what Tang teaches is far more limited – i.e., that awareness data is propagated between workstations - this awareness data is independent of the data being operated on ("File Y" of Tang Fig. 8) - this is not the same as the sending of commands to modify a model as recited by the present claims.

> the method comprising receiving at a first workstation input from a user specifying a modification of a model (col. 4, lines 20-52), translating input into command specifying the portion of the model to be modified and the modification to be made (col. 5, line 1 to col. 6, line 65), modifying model at first workstation in accordance with command (col. 7, line 1 to col. 8, line 14; col. 10, lines 28-62), transmitting command via a network to other workstations in the system (col. 11, lines 24-50), processing command at a second workstation (col. 12, lines 31-61), and modifying model at second workstation in accordance with command (col. 13, line 62 to col. 16, line 56).

Generally speaking, the "heart" of the foregoing claim elements is that a model, maintained at two separate work stations, is kept in synchronization by transmitting modification commands between the workstations. For example, if a computer aided design system user at workstation #1 modifies a part of a model by applying an extrusion command to that part (thus modifying workstation #1's copy of the model data), that extrusion command is transmitted by workstation #1 to a second workstation (#2) so that the same part of the model, as maintained in a copy of the model data stored at workstation #2, will also undergo the extrusion command (thus updating workstation #2's copy of the model data and maintaining synchronization with the data at workstation #1). This functionality is recited by claim elements requiring "modifying said model at said first workstation in accordance with said command", "transmitting said command ... to other workstations..." and "modifying said model at said second workstation ...".

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Contrary to the Examiner's suggestion, the cited text of Tang does not disclose modifying a model at a first workstation, transmitting <u>the model modification command</u> to a second workstation, and modifying a model at a second in accordance with the command. For example, although the Examiner asserts that col. 13 line 62 – col. 16, line 16 teaches "modifying model at second workstation in accordance with command" the undersigned sees no such teaching in the cited text. Instead, the cited text is understood to teach operations of an "encounter server" through which users at different workstations are made aware of other users that are in "task proximity", but the cited text does not actually disclose a system whereby modifications are automatically transmitted between different users workstations as recited by claim 1.

If the Examiner continues to maintain the position that Tang teaches modifying a model at the first workstation, transmitting the model modification command to a second workstation, and modifying the model at the second in accordance with the command it is respectfully requested that the Examiner provide the following clarifications: 1) What is the "model" that the Examiner asserts is being modified?; 2) Where is it disclosed that there is a "model modification command" and what is that command?; 3) Where is it disclosed that the "model modification command" is transmitted to a second workstation; 4) Where is it disclosed that that second workstation <u>also</u> modifies the model based on the model modification command. The undersigned understands Tang as teaching that there is a single file ("File Y" of Tang Fig. 8) that is being accessed by multiple workstations and, accordingly, in Tang, there would be no need to perform the recited modification at both a first and at a second workstation.

In other words, Tang teaches awareness of others working on similar tasks in a network environment. One worker is task proximate to another worker when both are accessing similar types of data or using similar application tools within a particular time period. Workers share information on command tasks. Task proximity is based on three distinct factors (1) the application the worker is currently using, (2) the data the worker is accessing or manipulating, and (3) the time at which such actions occur. Each of these factors permit users to collaborate by allowing each worker to see both those other workers who are task proximate and those who are interacting. For example, the data being manipulated may be a spreadsheet. Worker A is currently working on the spreadsheet while worker B can access the same spreadsheet and see the changes that worker A is incorporated without duplicating the same change.

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The Examiner's summary of Tang further reinforces the fact that Tang and the present application are directed to entirely different inventions. While Tang teaches "awareness of others working on similar tasks" the present application has a different focus. The present claims are directed to is a system for simultaneous modification of an object by multiple workstations that are arranged in a peer-to-peer architecture. This is not "awareness of others working on similar tasks in a network environment" as taught by Tang. The undersigned believes that the Examiner has failed to show the elements recited by claim 1 of the present application and respectfully request that the Examiner withdraw his rejection under 35 USC 102 and allow the claims.

Claims 2-5 depend on claim 1 and are patentable over Tang for at least the reasons stated with respect to claim 1.

Claim Rejections - 35 USC § 103

Claims 6-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tang et al. (US patent no. 5,960,173) in view of Shinagawa et al. (US patent no. 6. 323, 863).

Re claims 8, 14, 19-20, and 23, Tang discloses a computer system receiving input into a command specifying a modification of the model (col. 2, lines 41-63; col. 3, lines 34-61, col. 4, lines 20-52), translating input into command specifying the portion of the model to be modified and the modification to be made (col. 5, line 1 to col. 6, line 65), modifying model in accordance with command (col. 7, line 1 to col. 8, line 14; col. 10, lines 28-62), transmitting command via a network to other workstations in the system (col. 11, lines 24-50). In other words, Tang teaches awareness of others working on similar tasks in a network environment. One worker is task proximate to another worker when both are accessing similar types of data or using similar application tools within a particular time period. Workers share information on command tasks. Task proximity is based on three distinct factors (1) the application the worker is currently using, (2) the data the worker is accessing or manipulating, and (3) the time at which such actions occur. Each of these factors permit users to collaborate by allowing each worker to see both those other workers who are task proximate and those who are interacting. For example, the data being manipulated may be a spreadsheet. Worker A is currently working on the spreadsheet while worker B can access the same spreadsheet and see the changes that worker A is incorporated without duplicating the same change.

As discussed above with respect to claim 1, Tang does not teach the elements cited in the foregoing comment from the Examiner. Accordingly, Tang also does not teach these elements (or the substance thereof) as recited in claims 8, 14, 19-20, and 23. Furthermore, these elements

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are not found in Shingawa. Because Tang and Shingawa, alone and in combination, fail to teach all of the elements recited by claim 1, 8, 14, 19-20, and 23 (and, consequently, they fail to teach all of the elements recited by their dependent claims 2-7, 9-13, 15-18, 21-22, 24-26), the Examiner's 103 rejection of claims in light of Tang and Shingawa is improper. It is respectfully requested that the Examiner withdraw his rejection of claims under 35 USC 103(a) and allow the claims.

<div align="center">Conclusion</div>

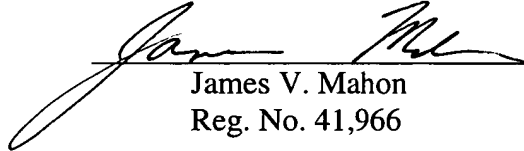Claims 1-26 are now pending and are believed to be in condition for allowance. No new matter has been added.

Please apply any credits or excess charges to our deposit account number 50-0521.

Respectfully submitted,

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